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Timestamp: [year=2008; month=8; day=13; hr=12; min=51; sec=37; ms=627; ]

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Application No: 10570909 Version No: 2.0

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<110> Hopf, Carsten  
 <120> Treatment of Neurodegenerative Diseases  
 <130> 14129-00001-US  
 <140> 10570909  
 <141> 2006-03-29

<150> PCT/EP2004/009771  
 <151> 2004-09-02

<150> EP 03019642.2  
 <151> 2003-09-05

<150> PCT/EP2003/013980  
 <151> 2003-12-10

<150> EP 04001895.4  
 <151> 2004-01-29

<150> EP 04001894.7  
 <151> 2004-01-29

<150> EP 04007447.8  
 <151> 2004-03-26

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<150> EP 04018874.0  
 <151> 2004-08-09

<160> 127

<170> PatentIn version 3.5

<210> 1

<211> 265

<212> PRT

<213> Homo sapiens

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Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu Arg Val  
20 25 30

Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser Leu Leu Leu  
35 40 45

Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr Asp Arg Ser Asp  
50 55 60

Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly Ala Ala Val Ser Val  
65 70 75 80

Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr Tyr Lys Leu Leu Lys Lys  
85 90 95

Ala Asp Glu Gly Leu Ala Ser Leu Ser Glu Asp Gly Arg Ser Pro Ile  
100 105 110

Ser Ile Arg Gln Met Ala Tyr Val Ser Gly Leu Ser Phe Gly Ile Ile  
115 120 125

Ser Gly Val Phe Ser Val Ile Asn Ile Leu Ala Asp Ala Leu Gly Pro  
130 135 140

Gly Val Val Gly Ile His Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser  
145 150 155 160

Ala Phe Leu Thr Ala Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val  
165 170 175

Val Phe Phe Asp Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu  
180 185 190

Val Val Gly Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro  
195 200 205

Trp Tyr Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met  
210 215 220

Gly Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln  
225 230 235 240

Arg Ser Leu Leu Cys Arg Arg Gln Glu Asp Ser Arg Val Met Val Tyr  
245 250 255

Ser Ala Leu Arg Ile Pro Pro Glu Asp  
260 265

<210> 2

<211> 743

<212> PRT

<213> Homo sapiens

<400> 2

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1 5 10 15

Gln Thr Tyr Thr Tyr Asp Ser Gly Ile His Ser Gly Ala Asn Thr Cys  
20 25 30

Val Pro Ser Val Ser Ser Lys Gly Ile Met Glu Glu Asp Glu Ala Cys  
35 40 45

Gly Arg Gln Tyr Thr Leu Lys Lys Thr Thr Thr Tyr Thr Gln Gly Val  
50 55 60

Pro Pro Ser Gln Gly Asp Leu Glu Tyr Gln Met Ser Thr Thr Ala Arg  
65 70 75 80

Ala Lys Arg Val Arg Glu Ala Met Cys Pro Gly Val Ser Gly Glu Gly  
85 90 95

Gln Leu Ala Leu Leu Ala Thr Gln Val Glu Gly Gln Ala Thr Asn Leu  
100 105 110

Gln Arg Leu Ala Glu Pro Ser Gln Leu Leu Lys Ser Ala Ile Val His  
115 120 125

Leu Ile Asn Tyr Gln Asp Asp Ala Glu Leu Val Thr Arg Ala Leu Pro  
130 135 140

Glu Leu Thr Lys Leu Leu Asn Asp Glu Asp Pro Val Val Val Thr Lys  
145 150 155 160

Ala Ala Met Ile Val Asn Gln Leu Ser Lys Lys Glu Ala Ser Arg Arg  
165 170 175

Ala Leu Met Gly Ser Pro Gln Leu Val Ala Ala Val Val Arg Thr Met  
180 185 190

Gln Asn Thr Ser Asp Leu Asp Thr Ala Arg Cys Thr Thr Ser Ile Leu  
195 200 205

His Asn Leu Ser His His Arg Glu Gly Leu Leu Ala Ile Phe Lys Ser  
210 215 220

Gly Gly Ile Pro Ala Leu Val Arg Met Leu Ser Ser Pro Val Glu Ser  
225 230 235 240

Val Leu Phe Tyr Ala Ile Thr Thr Leu His Asn Leu Leu Leu Tyr Gln  
245 250 255

Glu Gly Ala Lys Met Ala Cys Ala Gly Arg Arg Ala Gln Lys Met Val  
260 265 270

Pro Leu Leu Asn Lys Asn Asn Pro Lys Phe Leu Ala Ile Thr Thr Asp  
275 280 285

Cys Leu Gln Leu Leu Ala Tyr Gly Asn Gln Glu Ser Lys Leu Ile Ile  
290 295 300

Leu Ala Asn Gly Gly Pro Gln Ala Leu Val Gln Ile Met Arg Asn Tyr  
305 310 315 320

Ser Tyr Glu Lys Leu Leu Trp Thr Thr Ser Arg Val Leu Lys Val Leu  
325 330 335

Ser Val Cys Pro Ser Asn Lys Pro Ala Ile Val Glu Ala Gly Gly Met  
340 345 350

Gln Ala Leu Gly Lys His Leu Thr Ser Asn Ser Pro Arg Leu Val Gln  
355 360 365

Asn Cys Leu Trp Thr Leu Arg Asn Leu Ser Asp Val Ala Thr Lys Gln

370

375

380

Glu Gly Leu Glu Ser Val Leu Lys Ile Leu Val Asn Gln Leu Ser Val  
385 390 395 400

Asp Asp Val Asn Val Leu Thr Cys Ala Thr Gly Thr Leu Ser Asn Leu  
405 410 415

Thr Cys Asn Asn Ser Lys Asn Lys Thr Leu Val Thr Gln Asn Ser Gly  
420 425 430

Val Glu Ala Leu Ile His Ala Ile Leu Arg Ala Gly Asp Lys Asp Asp  
435 440 445

Ile Thr Glu Pro Ala Val Cys Ala Leu Arg His Leu Thr Ser Arg His  
450 455 460

Pro Glu Ala Glu Met Ala Gln Asn Ser Val Arg Leu Asn Tyr Gly Ile  
465 470 475 480

Pro Ala Ile Val Lys Leu Leu Asn Gln Pro Asn Gln Trp Pro Leu Val  
485 490 495

Lys Ala Thr Ile Gly Leu Ile Arg Asn Leu Ala Leu Cys Pro Ala Asn  
500 505 510

His Ala Pro Leu Gln Glu Ala Ala Val Ile Pro Arg Leu Val Gln Leu  
515 520 525

Leu Val Lys Ala His Gln Asp Ala Gln Arg His Val Ala Ala Gly Thr  
530 535 540

Gln Gln Pro Tyr Thr Asp Gly Val Arg Met Glu Glu Ile Val Glu Gly  
545 550 555 560

Cys Thr Gly Ala Leu His Ile Leu Ala Arg Asp Pro Met Asn Arg Met  
565 570 575

Glu Ile Phe Arg Leu Asn Thr Ile Pro Leu Phe Val Gln Leu Leu Tyr  
580 585 590

Ser Ser Val Glu Asn Ile Gln Arg Val Ala Ala Gly Val Leu Cys Glu  
595 600 605

Leu Ala Gln Asp Lys Glu Ala Ala Asp Ala Ile Asp Ala Glu Gly Ala  
610 615 620

Ser Ala Pro Leu Met Glu Leu Leu His Ser Arg Asn Glu Gly Thr Ala  
625 630 635 640

Thr Tyr Ala Ala Ala Val Leu Phe Arg Ile Ser Glu Asp Lys Asn Pro  
645 650 655

Asp Tyr Arg Lys Arg Val Ser Val Glu Leu Thr Asn Ser Leu Phe Lys  
660 665 670

His Asp Pro Ala Ala Trp Glu Ala Ala Gln Ser Met Ile Pro Ile Asn  
675 680 685

Glu Pro Tyr Gly Asp Asp Met Asp Ala Thr Tyr Arg Pro Met Tyr Ser  
690 695 700

Ser Asp Val Pro Leu Asp Pro Leu Glu Met His Met Asp Met Asp Gly  
705 710 715 720

Asp Tyr Pro Ile Asp Thr Tyr Ser Asp Gly Leu Arg Pro Pro Tyr Pro  
725 730 735

Thr Ala Asp His Met Leu Ala  
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<210> 3

<211> 467

<212> PRT

<213> Homo sapiens

<400> 3

Met Thr Glu Leu Pro Ala Pro Leu Ser Tyr Phe Gln Asn Ala Gln Met  
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Ser Glu Asp Asn His Leu Ser Asn Thr Val Arg Ser Gln Asn Asp Asn  
20 25 30



Arg Glu Arg Gln Glu His Asn Asp Arg Arg Ser Leu Gly His Pro Glu  
 35 40 45

Pro Leu Ser Asn Gly Arg Pro Gln Gly Asn Ser Arg Gln Val Val Glu  
 50 55 60

Gln Asp Glu Glu Glu Asp Glu Glu Leu Thr Leu Lys Tyr Gly Ala Lys  
 65 70 75 80

His Val Ile Met Leu Phe Val Pro Val Thr Leu Cys Met Val Val Val  
 85 90 95

Val Ala Thr Ile Lys Ser Val Ser Phe Tyr Thr Arg Lys Asp Gly Gln  
 100 105 110

Leu Ile Tyr Thr Pro Phe Thr Glu Asp Thr Glu Thr Val Gly Gln Arg  
 115 120 125

Ala Leu His Ser Ile Leu Asn Ala Ala Ile Met Ile Ser Val Ile Val  
 130 135 140

Val Met Thr Ile Leu Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys  
 145 150 155 160

Val Ile His Ala Trp Leu Ile Ile Ser Ser Leu Leu Leu Leu Phe Phe  
 165 170 175

Phe Ser Phe Ile Tyr Leu Gly Glu Val Phe Lys Thr Tyr Asn Val Ala  
 180 185 190

Val Asp Tyr Ile Thr Val Ala Leu Leu Ile Trp Asn Phe Gly Val Val  
 195 200 205

Gly Met Ile Ser Ile His Trp Lys Gly Pro Leu Arg Leu Gln Gln Ala  
 210 215 220

Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val Phe Ile Lys Tyr  
 225 230 235 240

Leu Pro Glu Trp Thr Ala Trp Leu Ile Leu Ala Val Ile Ser Val Tyr  
 245 250 255

Asp Leu Val Ala Val Leu Cys Pro Lys Gly Pro Leu Arg Met Leu Val  
260 265 270

Glu Thr Ala Gln Glu Arg Asn Glu Thr Leu Phe Pro Ala Leu Ile Tyr  
275 280 285

Ser Ser Thr Met Val Trp Leu Val Asn Met Ala Glu Gly Asp Pro Glu  
290 295 300

Ala Gln Arg Arg Val Ser Lys Asn Ser Lys Tyr Asn Ala Glu Ser Thr  
305 310 315 320

Glu Arg Glu Ser Gln Asp Thr Val Ala Glu Asn Asp Asp Gly Gly Phe  
325 330 335

Ser Glu Glu Trp Glu Ala Gln Arg Asp Ser His Leu Gly Pro His Arg  
340 345 350

Ser Thr Pro Glu Ser Arg Ala Ala Val Gln Glu Leu Ser Ser Ser Ile  
355 360 365

Leu Ala Gly Glu Asp Pro Glu Glu Arg Gly Val Lys Leu Gly Leu Gly  
370 375 380

Asp Phe Ile Phe Tyr Ser Val Leu Val Gly Lys Ala Ser Ala Thr Ala  
385 390 395 400

Ser Gly Asp Trp Asn Thr Thr Ile Ala Cys Phe Val Ala Ile Leu Ile  
405 410 415

Gly Leu Cys Leu Thr Leu Leu Leu Leu Ala Ile Phe Lys Lys Ala Leu  
420 425 430

Pro Ala Leu Pro Ile Ser Ile Thr Phe Gly Leu Val Phe Tyr Phe Ala  
435 440 445

Thr Asp Tyr Leu Val Gln Pro Phe Met Asp Gln Leu Ala Phe His Gln  
450 455 460

Phe Tyr Ile  
465

<211> 551

<212> PRT

<213> Homo sapiens

<400> 4

Met Val Gly Glu Glu Lys Met Ser Leu Arg Asn Arg Leu Ser Lys Ser  
1 5 10 15

Arg Glu Asn Pro Glu Glu Asp Glu Asp Gln Arg Asn Pro Ala Lys Glu  
20 25 30

Ser Leu Glu Thr Pro Ser Asn Gly Arg Ile Asp Ile Lys Gln Leu Ile  
35 40 45

Ala Lys Lys Ile Lys Leu Thr Ala Glu Ala Glu Ala Arg Leu Lys Pro  
50 55 60

Phe Phe Met Lys Glu Val Gly Ser His Phe Asp Asp Phe Val Thr Asn  
65 70 75 80

Leu Ile Glu Lys Ser Ala Ser Leu Asp Asn Gly Gly Cys Ala Leu Thr  
85 90 95

Thr Phe Ser Val Leu Glu Gly Glu Lys Asn Asn His Arg Ala Lys Asp  
100 105 110

Leu Arg Ala Pro Pro Glu Gln Gly Lys Ile Phe Ile Ala Arg Arg Ser  
115 120 125

Leu Leu Asp Glu Leu Leu Glu Val Asp His Ile Arg Thr Ile Tyr His  
130 135 140

Met Phe Ile Ala Leu Leu Ile Leu Phe Ile Leu Ser Thr Leu Val Val  
145 150 155 160

Asp Tyr Ile Asp Glu Gly Arg Leu Val Leu Glu Phe Ser Leu Leu Ser  
165 170 175

Tyr Ala Phe Gly Lys Phe Pro Thr Val Val Trp Thr Trp Trp Ile Met  
180 185 190

Phe Leu Ser Thr Phe Ser Val Pro Tyr Phe Leu Phe Gln His Trp Ala  
195 200 205

Thr Gly Tyr Ser Lys Ser Ser His Pro Leu Ile Arg Ser Leu Phe His  
210 215 220

Gly Phe Leu Phe Met Ile Phe Gln Ile Gly Val Leu Gly Phe Gly Pro  
225 230 235 240

Thr Tyr Val Val Leu Ala Tyr Thr Leu Pro Pro Ala Ser Arg Phe Ile  
245 250 255

Ile Ile Phe Glu Gln Ile Arg Phe Val Met Lys Ala His Ser Phe Val  
260 265 270

Arg Glu Asn Val Pro Arg Val Leu Asn Ser Ala Lys Glu Lys Ser Ser  
275 280 285

Thr Val Pro Ile Pro Thr Val Asn Gln Tyr Leu Tyr Phe Leu Phe Ala  
290 295 300

Pro Thr Leu Ile Tyr Arg Asp Ser Tyr Pro Arg Asn Pro Thr Val Arg  
305 310 315 320

Trp Gly Tyr Val Ala Met Lys Phe Ala Gln Val Phe Gly Cys Phe Phe  
325 330 335

Tyr Val Tyr Tyr Ile Phe Glu Arg Leu Cys Ala Pro Leu Phe Arg Asn  
340 345 350

Ile Lys Gln Glu Pro Phe Ser Ala Arg Val Leu Val Leu Cys Val Phe  
355 360 365

Asn Ser Ile Leu Pro Gly Val Leu Ile Leu Phe Leu Thr Phe Phe Ala  
370 375 380

Phe Leu His Cys Trp Leu Asn Ala Phe Ala Glu Met Leu Arg Phe Gly  
385 390 395 400

Asp Arg Met Phe Tyr Lys Asp Trp Trp Asn Ser Thr Ser Tyr Ser Asn  
405 410 415

Tyr Tyr Arg Thr Trp Asn Val Val Val His Asp Trp Leu Tyr Tyr Tyr  
420 425 430

Ala Tyr Lys Asp Phe Leu Trp Phe Phe Ser Lys Arg Phe Lys Ser Ala  
435 440 445

Ala Met Leu Ala Val Phe Ala Val Ser Ala Val Val His Glu Tyr Ala  
450 455 460

Leu Ala Val Cys Leu Ser Phe Phe Tyr Pro Val Leu Phe Val Leu Phe  
465 470 475 480

Met Phe Phe Gly Met Ala Phe Asn Phe Ile Val Asn Asp Ser Arg Lys  
485 490 495

Lys Pro Ile Trp Asn Val Leu Met Trp Thr Ser Leu Phe Leu Gly Asn  
500 505 510

Gly Val Leu Leu Cys Phe Tyr Ser Gln Glu Trp Tyr Ala Arg Gln His  
515 520 525

Cys Pro Leu Lys Asn Pro Thr Phe Leu Asp Tyr Val Arg Pr